Suggestion of a drug candidate for treating severe lung inflammations of COVID-19 patients.

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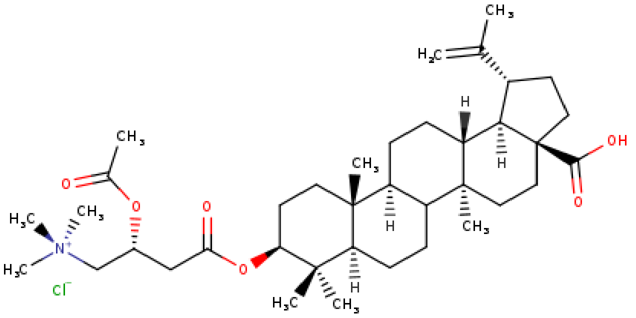
Corona virus species seem to interfere with NF-κB dependent inflammatory gene expression (cf. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5386326/)

Betulinic acid seems to be an interesting modulator of NF-κB activity.
(cf. https://www.researchgate.net/publication/7737696_Betulinic_acid_as_new_activator_of_NF-kB_Molecular_mechanisms_and_implications_for_cancer_therapy)

L-Carnitine esters might be useful prodrug candidates for inhalable steroides.
(cf. https://pubs.acs.org/doi/full/10.1021/mp100412z?src=recsys)

OK, it is a highly speculative approach, but I would suggest an esterification of the 3-hydroxy group of betulinic acid with acetyl-L-carnitine:



[(2R)-2-(acetyloxy)-4-{[(2S,5S,8R,9R,10R,13S,14R,17S,19R)-5-carboxy-2,14,18,18-tetramethyl-8-(prop-1-en-2-yl)pentacyclo[11.8.0.$0^{2,10}$.$0^{5,9}$.$0^{14,19}$]henicosan-17-yl]oxy}-4
oxobutyl]trimethylazanium chloride

The substance should be easiliy available from betulinic acid via the acyl chloride of acetyl-L-carnitine, which in turn is best prepared by using oxalyl chloride.
(cf. https://onlinelibrary.wiley.com/doi/abs/10.1002/cbdv.201200147)

If this idea leads to a publication, I would be very grateful, if my name would be mentioned within the acknowledgments for providing decisive inspirations.

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The drug candidate might be tested in Vienna at sars-cov-2 infected organoides.
(cf. https://www.imba.oeaw.ac.at/research-highlights/fighting-sars-cov-2-in-human-blood-vessel-organoids/)

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